

Claims

We claim:

1. A method for creating a graphical program including a plurality of portions of graphical source code to be executed sequentially, the method comprising:
 - 5 displaying a plurality of frames in the graphical program such that two or more frames are visible at the same time;
 - including a portion of graphical source code in each frame in response to user input;
 - 10 wherein the plurality of frames define an execution order for the plurality of portions of graphical source code such that during execution of the graphical program the plurality of portions of graphical source code are executed sequentially.
2. The method of claim 1,
 - 15 wherein the plurality of frames are displayed in the graphical program such that each frame is visible at the same time.
3. The method of claim 1, further comprising:
 - 20 receiving user input indicating a desire to specify a plurality of portions of graphical source code to be executed sequentially;
 - wherein said displaying the plurality of frames in the graphical program is performed in response to receiving the user input indicating the desire to specify a plurality of portions of graphical source code to be executed sequentially.
- 25 4. The method of claim 1,
 - wherein the plurality of frames are comprised in a sequence structure;
 - wherein said displaying the plurality of frames in the graphical program is performed in response to user input indicating a desire to include a sequence structure in the graphical program.

5. The method of claim 1,
wherein each frame is displayed side by side in a left-to-right order;
wherein the plurality of frames define an execution order for the plurality of
5 portions of graphical source code such that during execution of the graphical program the
plurality of portions of graphical source code are executed sequentially in the left-to-right
order.

6. The method of claim 1, further comprising:
10 executing the graphical program;
wherein said executing the graphical program comprises executing each portion of
graphical source code sequentially according to the execution order defined by the
plurality of frames.

15 7. The method of claim 1, wherein for each frame, said including a portion of
graphical source code in the frame in response to user input comprises:
including one or more nodes in the frame in response to user input;
if two or more nodes are included in the frame, interconnecting the two or more
nodes in response to user input.

20 8. The method of claim 1, further comprising:
displaying a wire in response to user input;
defining endpoints for the wire in response to user input, such that a first endpoint
of the wire is in a first frame having an associated first portion of graphical source code
25 and a second endpoint of the wire is in a second frame having an associated second
portion of graphical source code;
wherein the wire is operable to cause data to be passed from the first portion of
graphical source code to the second portion of graphical source code during execution of
the graphical program.

9. The method of claim 1, further comprising:
including a portion of graphical source code in the graphical program that is not
associated with one of the frames.

5

10. The method of claim 9, further comprising:
displaying a wire in response to user input;
defining endpoints for the wire in response to user input, such that a first endpoint
of the wire is in a first frame having an associated first portion of graphical source code
10 and a second endpoint of the wire is in the portion of graphical source code that is not
associated with one of the frames;

wherein the wire is operable to cause data to be passed from the first portion of
graphical source code to the portion of graphical source code that is not associated with
one of the frames during execution of the graphical program.

15

11. The method of claim 10,
wherein, in the execution order, the first frame comes before a second frame
having an associated second portion of graphical source code;
wherein during execution of the graphical program, the data is passed from the
20 first portion of graphical source code to the portion of graphical source code that is not
associated with one of the frames without waiting for the second portion of graphical
source code to be executed.

12. The method of claim 1,
25 wherein the plurality of frames is a first plurality of frames;
wherein for a first frame in the first plurality of frames, said including a portion of
graphical source code in the first frame comprises nesting a second plurality of frames in
the first frame;
wherein said nesting a second plurality of frames in the first frame comprises:

displaying the second plurality of frames in the first frame such that two or more frames of the second plurality of frames are visible at the same time;

including a portion of graphical source code in each frame of the second plurality of frames in response to user input;

5 wherein the portions of graphical source code included in the frames of the second plurality of frames comprise a second plurality of portions of graphical source code;

10 wherein the second plurality of frames define an execution order for the second plurality of portions of graphical source code such that during execution of the first frame in the first plurality of frames, the second plurality of portions of graphical source code are executed sequentially.

13. The method of claim 1,

wherein the graphical program is a graphical data-flow program.

15 14. A system for creating a graphical program including a plurality of portions of graphical source code to be executed sequentially, the system comprising:

a processor;

a memory storing program instructions;

20 wherein the processor is operable to execute the program instructions to:

display a plurality of frames in the graphical program such that two or more frames are visible at the same time;

include a portion of graphical source code in each frame in response to user input;

25 wherein the plurality of frames define an execution order for the plurality of portions of graphical source code such that during execution of the graphical program the plurality of portions of graphical source code are executed sequentially.

15. The system of claim 14,

wherein the plurality of frames are displayed in the graphical program such that each frame is visible at the same time.

16. The system of claim 14,

5 wherein the processor is further operable to execute the program instructions to receive user input indicating a desire to specify a plurality of portions of graphical source code to be executed sequentially;

wherein said displaying the plurality of frames in the graphical program is performed in response to receiving the user input indicating the desire to specify a 10 plurality of portions of graphical source code to be executed sequentially.

17. The system of claim 14,

wherein the plurality of frames are comprised in a sequence structure;

15 wherein said displaying the plurality of frames in the graphical program is performed in response to user input indicating a desire to include a sequence structure in the graphical program.

18. The system of claim 14,

wherein each frame is displayed side by side in a left-to-right order;

20 wherein the plurality of frames define an execution order for the plurality of portions of graphical source code such that during execution of the graphical program the plurality of portions of graphical source code are executed sequentially in the left-to-right order.

25 19. The system of claim 14,

wherein the processor is further operable to execute the graphical program;

wherein said executing the graphical program comprises executing each portion of graphical source code sequentially according to the execution order defined by the plurality of frames.

20. The system of claim 14,
wherein the graphical program is a graphical data-flow program.

5 21. A memory medium for creating a graphical program including a plurality
of portions of graphical source code to be executed sequentially, the memory medium
comprising program instructions executable to:

display a plurality of frames in the graphical program such that two or more
frames are visible at the same time;

10 include a portion of graphical source code in each frame in response to user input;
wherein the plurality of frames define an execution order for the plurality of
portions of graphical source code such that during execution of the graphical program the
plurality of portions of graphical source code are executed sequentially.

15 22. The memory medium of claim 21,
wherein the plurality of frames are displayed in the graphical program such that
each frame is visible at the same time.

20 23. The memory medium of claim 21, further comprising program instructions
executable to:

receive user input indicating a desire to specify a plurality of portions of graphical
source code to be executed sequentially;

25 wherein said displaying the plurality of frames in the graphical program is
performed in response to receiving the user input indicating the desire to specify a
plurality of portions of graphical source code to be executed sequentially.

24. The memory medium of claim 21,
wherein the plurality of frames are comprised in a sequence structure;

wherein said displaying the plurality of frames in the graphical program is performed in response to user input indicating a desire to include a sequence structure in the graphical program.

5 25. The memory medium of claim 21,
wherein each frame is displayed side by side in a left-to-right order;
wherein the plurality of frames define an execution order for the plurality of portions of graphical source code such that during execution of the graphical program the plurality of portions of graphical source code are executed sequentially in the left-to-right
10 order.

26. The memory medium of claim 21,
wherein the graphical program is a graphical data-flow program.

15